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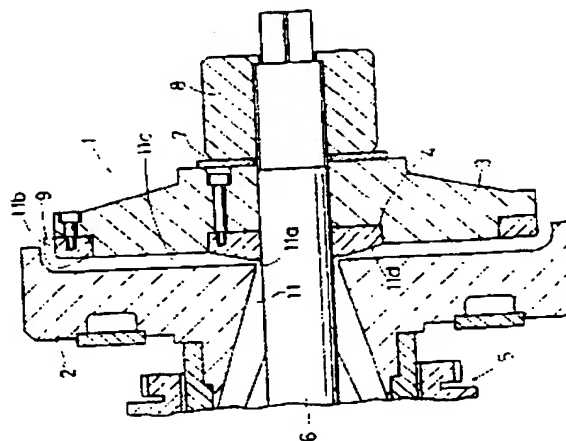
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TITLE : ORIENTATING METHOD OF STAPLE
FIBRE OF RUBBER MATRIX AND
EXPANDING DIE USING THEREFOR



ABSTRACT : **PURPOSE:** To perform a three dimensional array of staple fibres in a rubber matrix containing staple fibres by controlling the passage width ratio in an inlet part and a middle part of an expanding die, the passage width ratio in the middle part and an outlet part, and the radius and cross-sectional area of the inlet part and the outlet part.

CONSTITUTION: In an extruder attached with an expanding die 1, the cross-sectional area of an outlet space 11b is formed larger than the cross-sectional area of an inlet space 11a, and a middle space 11c provides an enlarged space 11 wherein the passage width may be varied from a predetermined passage width of the inlet space 11a until a predetermined passage width of the outlet space 11b. Consequently, in a rubber matrix, the bucking of a sheet 15 occurs at the transferring place from the inlet space 11a to the middle space 11, and since it fills up the enlarged space in accordance with the degree of variation in the enlarged spacing part, the rubber is folded up regularly and the array direction of the staple fibers is varied into the circumferential direction and the orientating ratio is controlled. Thus, the orientating ratio of a three dimensional direction of the staple fibres is controlled freely by means of an expanding die.

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